

REMARKS

The above amendments are made in response to the outstanding Final Office Action dated December 31, 2008. The Examiner's reconsideration is respectfully requested in view of the above amendments and the following remarks.

Claims 10 and 11 have been amended to more clearly define the subject matter of the claimed invention. Claims 7 and 20 have previously been cancelled. No new matter has been introduced by these amendments.

Claims 1-6, 8-19, 21 and 22 are thus pending in this application.

Claim Rejections Under 35 U.S.C. §103

Claims 1-6, 8-19 and 21-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over KR'158.

In order for an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996). See MPEP 2143.

Establishing a prima facie case of obviousness requires that all elements of the invention be disclosed in the prior art. *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Further, even assuming that all elements of an invention are disclosed in the prior art, an Examiner cannot establish obviousness by locating references that describe various aspects of a patent applicant's invention without also providing evidence of the motivating force which would have impelled one skilled in the art to do what the patent applicant has done. *Ex parte Levengood*, 28 U.S.P.Q.

1300 (Bd. Pat. App. Int. 1993). The references, when viewed by themselves and not in retrospect, must suggest the invention. *In re Skill*, 187 U.S.P.Q. 481 (C.C.P.A. 1975).

Applicants have amended Claims 10 and 11 to more clearly define the subject matter of the claimed invention, i.e., to further recite a limitation “to form a symmetric structure of the lower and upper layers with respect to the core layer.” Applicants believe that this additional limitation does not require further search, in view of the limitation “the upper layer and the lower layer are symmetric to each other with respect to the core layer” recited in Claims 1 and 2.

Claims 1, 2, 10 and 11 are independent claims. Claim 3-6, 8 and 9 are dependent directly from Claim 1. Claims 16-19 are dependent directly from Claim 2. Claims 13, 14 and 15 are dependent directly or indirectly from Claim 10. Claims 12, 21 and 22 are dependent directly from Claim 11.

The independent Claims 1 and 2 include, *inter alia*, the following limitation:

wherein the upper layer and the lower layer are symmetric to each other with respect to the core layer, and
the first (or second) plastic layer comprises calcium carbonate in an amount of at least 70 % by weight based on the total weight of the first (or second) plastic layer

The claimed invention is drawn to a wood flooring, and includes a lower layer having a first veneer layer, an upper layer having a laminated wood layer, and a core layer in-between. The core layer includes a first plastic layer or first and second plastic layers.

As above, the claimed invention includes *the upper and lower layers being symmetric to each other with respect to a core layer, and the plastic layer comprising calcium carbonate in an amount of at least 70% by weight based on the total weight of the plastic layer*. Therefore, the wood flooring has an improved balancing effect, due to the symmetrical structure of the lower and upper layers, thereby solving the problem of distortion by environmental changes during manufacturing and in service of the product. Further, the claimed invention provides an improved heating effect for an under-floor heater system, due to the plastic layer comprising the

calcium carbonate in the specified amount, as shown in Table 1 on pages 11 and 12 of this application (See the column "Heat preservation (Heat loss)" in Table 1).

In the outstanding Final Office Action, the Examiner has stated that 1) the teachings of the prior art do not have to be explicit, for the claimed symmetry of the laminate and the claimed amount of calcium carbonate, 2) calcium carbonate is well known in the art as an additive and it would have been obvious to optimize amount of such additive to obtain better thermal properties of the product, and 3) the table 1 of this application does not show the unexpected result regarding the symmetry of the product and also there is no evidence that the claimed article has any better results than KR'158.

Applicants respectfully disagree with the Examiner's characterization of the KR' 158 reference.

KR'158 is directed to a floor decorating material comprising vinyl chloride resin laminated with patterned wood that has deluxe appearance, good flexibility or the like. As shown in Fig. 3 thereof, KR' 158 includes a balance layer 30, a polyvinyl chloride layer 40, an adhesive layer 50, a patterned wood layer 70 and a surface painting layer 70, in the described order from the bottom.

However, KR'158 is silent about the symmetrical structure of any layers, and thus is basically different from Applicants' claimed structure. That is, there is no teaching in KR, 158 as to the claimed symmetrical structure.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977)." "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433." (MPEP 2112.01: Emphasis added)

Here, the “claimed product” includes a symmetrical structure, but the “prior art product” (in KR’ 158) is anything but a symmetrical structure. In KR’ 158, there is no teaching or suggestion to anything about the applicants’ claimed product (a symmetrical structure). Further, there is no sign of intention, in KR’ 158, to produce Applicants’ claimed symmetric-structured product.

Therefore, Applicants submit that the prior art product (anything but a symmetrical structure) does not necessarily possess the characteristics of the claimed symmetrical structure.

Further, Applicants respectfully submit that the layer structure in KR’ 158 **cannot** be modified to reach the claimed symmetrical structure, without significant re-structuring or redesign in the structure thereof and also without losing the original purposes and operational principles intended in the KR’ 158 reference. Thus, there is no motivation or suggestion in KR’ 158 to a person having ordinary skill in the art who would have been in attempt to modify KR’ 158 and obtain the claimed symmetrical structure. (MPEP 2143.01; *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959))

In the Office Action, the Examiner has stated the following: “Calcium carbonate is well known in the art as an additive and it would have been obvious to optimize amount of such additive to obtain better thermal properties of the product.”

It is submitted that KR’ 158 is silent about *the plastic layer comprising calcium carbonate in an amount of at least 70% by weight based on the total weight of the plastic layer*, as recited in Claims 1 and 2. Thus, Applicants respectfully request the Examiner to show documentary evidence as to the *calcium carbonate* additive to obtain better thermal properties in the flooring art. *Soli*, 317 F.2d at 946, 37 USPQ at 801; *Chevenard*, 139 F.2d at 713, 60 USPQ at 241: “If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge.”

In the Office Action, the Examiner has stated the following: “As to results in the table 1, the Examiner fails to see the unexpected regarding the symmetry of the product and also there is no evidence that the claimed article has any better results than KR’ 158.”

KR '158 is disclosed as prior art in the specification of the present application, as follows: "Fig. 3 is a schematic cross-sectional view of a wood flooring with laminated wood which is disclosed in Korean Patent Registration No. 292,585. The wood flooring has a lower layer reinforced by glass fiber and is more settled than the PVC tile of Korean Patent Laid-open Publication No. 1998-47176. Nonetheless, the wood flooring does not have sufficient balancing effect due to its asymmetric structure in the upper and lower sides." (see lines 11-16 on page 2 of this application) It is noted that KR'158 corresponds to Korean Patent Registration No. 292,585, and Fig. 3 of this application is the same as Fig. 3 of KR' 158.

That is, the claimed invention is devised to solve the problem of conventional wood floorings, such as KR '158, by using the claimed **symmetric structure** of the upper layer and the lower layer with respect to the core layer and thereby improving the balancing effect. In Table 1 of this application, wood flooring of Comparative Example 3 corresponds to Fig. 3 disclosed in KR' 158 (see lines 22-25 on page 11 of this application). While each of the wood floorings of the claimed invention (Examples 1-5) has the balancing effect of less than 0.15-0.25 mm, that of KR '158 (Comparative Example 3) has the balancing effect of 0.35 mm. That is, the balancing of the wood floorings of the claimed invention has been found out to be improved by 28-57 %, compared to that of KR '158. The balancing effect is defined by the extent of bend in the direction of width measured after being kept at room temperature and 80°C for 6 hours (see lines 12-13 on page 12 of this application).

In view of the above discussions, Applicants respectfully submit that it is evident from Table 1 (Examples and Comparative Examples) that the claimed article has results unexpected and better than KR' 158.

Regarding Claim 9, which is directly dependent from Claim 1, Claim 9 further limits the recitation of Claim 1, as follows:

"a soundproof layer is further contained, or wherein the first plastic layer further comprises iron in an amount of at least 100 parts by weight per 100 parts by weight of the base polymer, wherein the amount of the calcium carbonate is reduced to be 150 to 200 parts by weight per 100 parts by weight of the base polymer."

As shown in Table 1 of this application, the wood flooring of Example 6, which contains iron and reduced amount of calcium carbonate, has a higher soundproof effect of 53

dB, compared to that of Comparative Example 3 (KR '158) of 58 dB. That is, the soundproof effect has enhanced.

Applicants respectfully submit that KR '158 neither teaches nor suggests the above features recited in Claim 9 and the improved soundproof effect resulting therefrom.

The independent Claims 10 and 11 are drawn to a method of manufacturing a wood flooring having the wood floor structure recited in Claims 1 and 2.

Thus, the above discussions in connection with Claims 1 and 2 and the KR' 158 reference apply to Claims 10 and 11 in the same manners.

It is therefore submitted that KR'158 does not render obvious the subject matter claimed in Claims 1, 2, 10 and 11, and thus *no suggestion or motivation* exists in the cited reference. Accordingly, *prime facie* obviousness does not exist regarding the subject matter claimed in Claims 1, 2, 10 and 11 with respect to the cited reference. Applicants respectfully submit that Claims 1, 2, 10 and 11 are now allowable over KR'198.

Claim 3-6 and 8, Claims 16-19, Claims 13, 14 and 15, and Claims 12, 21 and 22 are also believed to be allowable, by virtue of their direct or indirect dependency from Claim 1, 2, 10 and 11 respectively.

Applicants submit that Claim 9 is also believed to be allowable, by means of its direct dependency from Claim 1, or by its own technical features recited therein.

Applicants respectfully request the Examiner to review these submissions and withdraw the rejection on the claims under 35 U.S.C. §103(a).

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Reconsideration and subsequent allowance of this application are courteously requested.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicants' attorneys.

The Examiner is invited to contact Applicants' Attorneys at the below-listed telephone number with any questions or comments regarding this Response or otherwise concerning the present application.

Respectfully submitted,

CANTOR COLBURN, LLP

By: /Jaegyoo Jang /
Jaegyoo Jang
Limited Recognition No. L0469

Date: March 27, 2009
Cantor Colburn LLP
1800 Diagonal Road
Suite 510
Alexandria, VA 22314
Telephone: (703) 236-4500
Facsimile: (703) 236-4501